

UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA  
OAKLAND DIVISION

IN RE: CATHODE RAY TUBE (CRT)  
ANTITRUST LITIGATION

This document relates to:  
ALL INDIRECT PURCHASER ACTIONS

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**DECLARATION OF MARGARET E. GUERIN-CALVERT IN RESPONSE TO  
DECLARATION OF DR. JANET NETZ OPPOSING MOTION TO PARTIALLY  
EXCLUDE THE TESTIMONY OF DR. NETZ**

4/5/2023

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## **I. Introduction**

### **A. Qualifications and Assignment**

1. I am Margaret E. Guerin-Calvert, President and Senior Managing Director of FTI Consulting, Inc. Center for Healthcare Economics and Policy. I have submitted several expert reports and provided testimony at a deposition in the context of the instant CRT litigation.<sup>1</sup> My last expert declaration<sup>2</sup> was submitted on February 15, 2023 in support of a motion by defendants Irico Group Corporation and Irico Display Devices Co., Ltd. (hereafter “Irico”) to partially exclude the testimony of indirect purchaser plaintiffs’ (IPPs) economic expert, Dr. Janet Netz. Since then Dr. Netz has submitted a declaration in response to the motion by Irico and in response to my Daubert Declaration.<sup>3</sup> Counsel for Irico have asked me to review and opine on Dr. Netz’s opinions—as expressed in her 2023 Declaration—about the reliability of her CRT damages analysis.

2. My qualifications are described in my February 15, 2023 declaration.<sup>4</sup> My CV and recent testimony list are also attached to that declaration. Materials I relied on for this declaration are listed in Attachment A below.

3. Compass Lexecon is being compensated for my work at my customary hourly rate of \$1,410. This compensation is in no way connected to the outcome of this litigation.

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<sup>1</sup> Expert Report of Margaret E. Guerin-Calvert, August 5, 2014 (hereafter “Guerin-Calvert 2014 Report”); Expert Surrebuttal Report of Margaret E. Guerin-Calvert, November 6, 2014 (hereafter “Guerin-Calvert 2014 Surrebuttal Report”); Declaration of Margaret E. Guerin-Calvert in Support of Motion by Irico Group Corp. and Irico Display Devices Co. Ltd to exclude the Testimony of Dr. Janet Netz, February 15, 2023 (hereafter “Guerin-Calvert Daubert Declaration” or “Daubert Declaration”); Deposition of Margaret E. Guerin-Calvert, September 17, 2014.

<sup>2</sup> Guerin-Calvert Daubert Declaration.

<sup>3</sup> Declaration of Janet S. Netz, Ph.D. in Response to Irico Defendants’ Motion to Partially Exclude Testimony, March 20, 2023 (hereafter “Netz 2023 Declaration”).

<sup>4</sup> Guerin-Calvert Daubert Declaration, § I.



## II. Overview

4. In her most recent declaration, Dr. Netz attempts to characterize the evidence that I presented about the unreliability of her damages analysis as a “simple disagreement” between Dr. Netz and me “as to which supply and demand factors to employ” in her overcharge regression model.<sup>5</sup> This is not the case.

5. Dr. Netz’s recent declaration does not address the central question of whether her overcharge model satisfies a standard test of reliability, i.e., whether the relevant major market factors that she omitted would, if included, yield results, in particular estimates of overcharges, that are significantly different than the results she obtained. My empirical findings demonstrate that much of the effect that Dr. Netz’s model attributed to the alleged cartel was, in fact, the influence that omitted major market factors had on CRT prices. Put differently, her model’s estimates of overcharges are biased and unreliable.

6. A reliable model of damages must control for all major market factors that changed between the alleged cartel period and the benchmark non-cartel periods so that the only (potentially) major remaining difference between the cartel and non-cartel periods is the effect of the alleged conduct.<sup>6</sup> Dr. Netz does not disagree with this standard but she fails to satisfy it. To evaluate whether Dr. Netz’s model met this standard, I have presented results of applying a standard economic evaluation and empirical testing methodology of damages models. Specifically, if market factors that are likely to be relevant—based on economic reasoning—are included in a damages model are statistically significant, and if their inclusion causes the overcharge estimated by the original model to change substantially, then the test indicates the market factors were major influences on CRT prices and their omission makes the original overcharge estimate unreliable because it conflates impacts of changes in market conditions with the impacts of the alleged cartel conduct.<sup>7</sup>

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<sup>5</sup> Netz 2023 Declaration, p. 5.

<sup>6</sup> Guerin-Calvert Daubert Declaration, ¶ 11, fn. 21, and citing there and below to relevant economic literature on this point.

<sup>7</sup> Guerin-Calvert Daubert Declaration, ¶¶ 11-12.

7. Application of this standard evaluation and test to Dr. Netz's model shows that her analysis omits major market factors such as the cost of shipping, exchange rates, labor costs, and changes in CDT demand due to rapid adoption of Windows 95 and other PC technologies, labor costs, among others.<sup>8</sup> The inclusion of these market factors in Dr. Netz's model without making any other changes causes her model to estimate overcharges that differ from the original overcharge estimates by a factor of 5x for CPTs and 10x for CDTs. The wide variation in her estimates indicates her model is unreliable because it misattributes the price effects of changes in market conditions to the alleged cartel conduct.<sup>9</sup>

8. In her recent response, Dr. Netz does not deny that the market factors I identified are relevant to CRT demand and cost conditions, nor does she deny that their inclusion in her overcharge model leads to substantial changes in her estimated overcharges. Dr. Netz ignores the relevance of these factors, instead claiming that no econometric model can be comprehensive. Thus, she wrongly contends that our dispute is merely about which specific variables to include in the regression model.<sup>10</sup> However, economic literature (and the ABA treatise Dr. Netz relies on for support) makes it clear that while there may be factors that are not identifiable or measurable and hence cannot be included in an econometric model, a reliable analysis should include factors that are: (i) identifiable and measurable (as is the case here), especially when: (ii) their inclusion is supported by economic reasoning (as is the case here), and (iii) they are statistically significant when included (as is also the case here).<sup>11</sup> This is further heightened in importance when, as here, the excluded factors have a substantial impact on the estimate of the parameter of interest, in this case the alleged cartel's overcharge. Economic literature, logic and empirical evidence demonstrate that Dr. Netz's model omits major market factors, and standard economic practice leads to the conclusion that her model is fundamentally unreliable.

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<sup>8</sup> Guerin-Calvert Daubert Declaration, ¶¶ 13-14.

<sup>9</sup> Ibid.

<sup>10</sup> Netz 2023 Declaration, pp. 5-6.

<sup>11</sup> See discussion in § III.B below.

9. Dr. Netz's overcharge regression model is unreliable for another reason—it is premised on the unsupported assumption that overcharges caused by the alleged conduct were uniform over an almost 12-year period during the alleged class period. As I explained in my Daubert Declaration, this assumption of uniform overcharges is implausible given the substantial changes in CRT market conditions during the relevant period.<sup>12</sup> Dr. Netz did not test the core assumption about uniform overcharges in her model – that is, whether these varied across periods, but I did, and I found that her own data – without even adding the omitted market factors cited above – refute the assumption of uniform overcharges. That is, if her model is estimated without assuming overcharges were uniform, then the results show that (i) overcharges varied materially over time and, as importantly (ii) *aggregate overcharges for the entire class period* are substantially different from the aggregate overcharges Dr. Netz estimates.<sup>13</sup> This is indicative that her model rests on a false premise of uniform overcharges, that it omits major market factors that were driving changes over time including cartel effectiveness and impact, and that omission causes her model to be unreliable even as a means of estimating aggregate overcharges.

10. Moreover, in her most recent declaration responding in part to this critique, Dr. Netz's own analysis demonstrates that her initial assumption of uniform overcharges during the nearly 12-year period (Q2 1995-Q4 2006) within the class period is incorrect. She demonstrates this when she segments the relevant period in various ways and, as a result, her analysis estimates very different overcharges across the sub-periods.<sup>14</sup> Dr. Netz, however, claims that this is merely another disagreement about the choice of models, in this case a disagreement about how specifically to segment the class period – e.g., she prefers longer segmentations of four years/six years or up to almost 11 years, whereas I have analyzed shorter segmentations (one-year, two-year and three-year windows). In Dr. Netz's view, the use of longer period segmentations support her initial model because they yield aggregate overcharge estimates that are more similar to her original estimates—even

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<sup>12</sup> Guerin-Calvert Daubert Declaration, § III.B.

<sup>13</sup> Guerin-Calvert Daubert Declaration, § III.B. and Tables 3-4.

<sup>14</sup> Netz 2023 Declaration, Tables 1, 3 and 4.

if the shorter segmentations do not do so.<sup>15</sup> And she claims that one of her longer segmentations is more reliable than the shorter ones I have examined because it is based on changes over time in a single specific market factor, i.e., LCD penetration.<sup>16</sup>

11. However, contrary to Dr. Netz's claim, this is not a technical dispute about how best to segment the class period into specific time periods. Instead, the issue is about the reliability of Dr. Netz's model for estimating overcharges attributable to alleged cartel conduct and whether the model is based on demonstrably false and unsupported assumptions. In all of the segmentations she now proposes, Dr. Netz assumes uniform overcharges during long periods of time, as long as almost 11 years for her preferred segmentation based on LCD penetration. This is despite empirical evidence showing market conditions changed rapidly within the windows that Dr. Netz identified, rendering that assumption flawed. As before, she does not test whether her data and model support her assumption of uniform overcharges for these or her original periods. I have tested this using standard econometric techniques, and the tests indicate the assumptions are not supported. In fact, tests show that Dr. Netz's model continues to produce varying overcharge estimates even within the slightly shorter-than-original segments of the class period that she analyzed in her most recent declaration. In other words, even Dr. Netz's slightly shorter time segments contain statistically significant variation in overcharge estimates within the segments and are thus inconsistent with Dr. Netz's assumption of uniform overcharges.

12. Finally, I previously presented analyses that the but-for prices predicted by Dr. Netz's overcharge model for certain CPTs were below price floors set by the Chinese government. I concluded that Dr. Netz's failure to account for the effect of such price floors could cause her to misstate and overstate overcharges for at least some CPTs.<sup>17</sup> In her previous response and her most recent response, Dr. Netz fails to demonstrate that it is

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<sup>15</sup> Netz 2023 Declaration, pp. 9-10.

<sup>16</sup> Netz 2023 Declaration, p. 10.

<sup>17</sup> Supplemental Expert Report of Margaret E. Guerin-Calvert, March 16, 2022 (hereafter "Guerin-Calvert 2022 Supplemental Report"), § III.C.

unnecessary to account for these price floor regulations in China in order for her overcharge model to provide sound overcharge estimates for these affected CPTs.

### **III. Dr. Netz's estimates of overcharges are unreliable because her analysis does not control for major market factors**

#### **A. Dr. Netz's overcharge model is unreliable as a means of estimating aggregate, class-wide damages**

13. Dr. Netz mischaracterizes my critique of her damages analysis and its unreliability. Contrary to what Dr. Netz claims,<sup>18</sup> I do not contend in my Daubert Declaration that her model is unreliable as a means of estimating damages suffered by *individual* class members. Nowhere in my Daubert Declaration is there any reference to individualized damages, and Dr. Netz fails to cite to any such references in my Daubert Declaration.<sup>19</sup> Instead, my point is that Dr. Netz's model is unreliable as a measure of *aggregate* damages for the reasons I explained in my Daubert Declaration and explain again in this declaration.

14. Dr. Netz also mischaracterizes my critique of her damages analysis as a dispute about which variables to control for in a damages analysis. She contends that it is a "simple disagreement ... as to which supply and demand factors to employ."<sup>20</sup> It is not. In fact, as I explained in my Daubert Declaration, the issue is whether Dr. Netz's damages model provides a **reliable** basis to estimate overcharges for CRTs by controlling for all relevant

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<sup>18</sup> Netz 2023 Declaration, pp. 3-4.

<sup>19</sup> Dr. Netz instead refers to a citation by me to an ABA article as evidence of my analysis somehow being focused on the reliability of her model as a means of estimating individualized damages. (Netz 2023 Declaration, p. 4 and fn. 14.) However, Dr. Netz's citation is to my August 2014 merits report – not my Daubert Declaration. Although my expert reports in 2014 refer to the inability of the Dr. Netz's damages analysis to reliably estimate class-wide damages, the focus in these expert reports is mainly on the inability of Dr. Netz's analysis to reliably estimate aggregate overcharges. See, e.g., Guerin-Calvert 2014 Report, §IV.C. My Daubert Declaration in February 2023 is entirely focused on the topic of aggregate overcharges. For example, the discussion in § III.A of my 2023 Daubert Declaration is about how the addition of economically appropriate market factors to Dr. Netz's model causes its overcharge estimates to change substantially; the overcharges of interest are the aggregate overcharges. The same is true for the rest of my Daubert Declaration.

<sup>20</sup> Netz 2023 Declaration, p. 5.



major market factors that affected the prices of CRTs during the data period. That is the proposition tested.

15. In the rest of this section, I explain further why Dr. Netz's responses in her Daubert reply declaration fail to establish that her overcharge analysis is reliable as a means of estimating aggregate damages.

## **B. Dr. Netz's overcharge analysis does not control for major market factors**

### *Importance of Controlling for Major Market Factors*

16. In her most recent declaration, Dr. Netz improperly dismisses the importance of identifying major market factors for model reliability when she claims that she has included *some* major market factors in her regression model and no econometric model can be comprehensive, so that there will always be additional variables that can be included in an econometric model.<sup>21</sup>

17. I agree that not all factors can be included in a regression model. However, all major market factors that can be readily identified and measured should be accounted for in a reliable model of damages. If not, their omission can cause the analysis to attribute changes in prices to the alleged cartel even when those price changes were actually influenced by changes in market factors unrelated to the alleged conduct.

18. This is not a controversial point; it is affirmed by practitioners and in economics textbooks. In fact, it is affirmed by the very document cited by Dr. Netz to support her claim that not all factors can be accounted for by an econometric model. Specifically, she provides only the following brief quote from an ABA treatise: "In practice, it is virtually impossible to ensure that every relevant variable has been captured in a regression model."<sup>22</sup> However, the same ABA treatise goes on to make further points, starting with the first quote below, that Dr. Netz does not reference, points that reject Dr. Netz's claim that her analysis is reliable:

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<sup>21</sup> Netz 2023 Declaration, pp. 5-6.

<sup>22</sup> Netz 2023 Declaration, p. 6 and fn. 29.

As a practical matter, the set of explanatory variables included in a regression equation almost never accounts for all of the factors that affect the dependent variable. **When there are many economic factors at work, generally there will be some factors that cannot be identified or measured, and thus cannot be included as explanatory variables in the model.**<sup>23</sup> (Emphasis added)

19. This quote from the ABA treatise relied on by Dr. Netz is referring to omissions of factors that cannot be identified or measured—but the market factors I addressed are readily identified and measured—and not grounds for excluding them as Dr. Netz does.

20. The same ABA treatise then proceeds to underscore the seriousness of omitting relevant market factors and that standard practice is to be over-inclusive of considered market factors in order to construct a reliable analysis:

An econometrician will never be able to include exhaustively all variables that are likely to be relevant. **Generally, the econometrician would like to include all the important factors, while being particularly sure that none of the variables that are excluded has a significant effect on the dependent variable.**<sup>24</sup> (Emphasis added)

Economic theory and industry knowledge might suggest a large number of potential explanatory variables. While there is a benefit to parsimony (namely, potentially increased precision of the estimates), there is typically a greater concern with omitting a potentially important explanatory variable, which can induce omitted-variable bias. **Thus one generally should exercise great care if potentially important variables are to be excluded from a model...It is rarely advisable to drop a theoretically important variable, especially if its coefficient is statistically significantly different from zero. Similarly, one generally should not drop a group of theoretically important variables when their coefficients are jointly statistically significantly different from zero (even if they are individually not statistically significantly different from zero).**<sup>25</sup> (Emphasis added)

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<sup>23</sup> ABA Section of Antitrust Law, *Econometrics: Legal, Practical and Technical Issues*, 2nd ed, 2014, p. 89.

<sup>24</sup> ABA Section of Antitrust Law, *Econometrics: Legal, Practical and Technical Issues*, 2nd ed, 2014, p. 82.

<sup>25</sup> *Id.*, p. 321.

21. The market factors that I identified and tested for in evaluating Dr. Netz's model as omitted major market factors were based on economic reasoning (i.e., they are theoretically important) and statistically significant and hence satisfy conditions for inclusion. Since these market factors are (i) relevant based on economic reasoning, (ii) statistically significant (neither of which is denied by Dr. Netz), (iii) have readily available data to measure (also not denied by Dr. Netz), and (iv) since their exclusion substantially affects Dr. Netz's results (also not denied by Dr. Netz), they cannot be ignored based merely on the claim that all econometric models are incomplete as Dr. Netz claims.

22. Econometric textbooks also recognize the consequences of omitting relevant factors: "The consequence [of omitted variable bias] is serious: the OLS estimator is biased."<sup>26</sup> "Controlling for omitted variables bias is necessary if parameter estimates are to be given a causal interpretation."<sup>27</sup>

*Testing for the Omission of Major Market Factors*

23. Furthermore, I explained in my Daubert Declaration, a commonly used test of omission of major market factors in a model of overcharges is to see if the addition of relevant market factors substantially alters the overcharge estimated by the model. If the addition of these major market factors in a model causes the estimated overcharge to change substantially, that is strong evidence that the model fails to account and control for key market factors. Such a model is unreliable because it attributes changes in market conditions to the alleged cartel conduct.<sup>28</sup>

24. This approach to test for the omission of major market factors from a damages model is noted in an American Bar Association (ABA) treatise on estimating antitrust damages. The treatise explains that if overcharges estimated by a regression model change "substantially" when explanatory variables that have a sound economic rationale are added

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<sup>26</sup> James H. Stock and Mark W. Watson, *Introduction to Econometrics*, 3rd edition, Addison Wesley, 2011, pp. 180-182 (cited in Guerin-Calvert Daubert Declaration, fn. 30).

<sup>27</sup> A. Colin Cameron and Pravin K. Trivedi, *Microeconometrics: Methods and Applications*, Cambridge University Press, 2005, p. 93.

<sup>28</sup> Guerin-Calvert Daubert Declaration, ¶¶ 12-13.



to a model, then the model that omits these variables is “misspecified and its results are biased and unreliable.”<sup>29</sup>

25. Econometric textbooks also note this approach to testing for the omission of major explanatory factors in a regression model.<sup>30</sup>

26. As I have explained previously and summarized in my Daubert Declaration,<sup>31</sup> tests for the omission of major market factors in Dr. Netz’s overcharge model were done by first identifying cost and demand factors that—based on the factual record and economic logic—likely would have had a substantial impact on CRT prices and yet were omitted from Dr. Netz’s model of CRT overcharges. These variables were added to Dr. Netz’s model to see if they do indeed affect CRT prices (i.e., were they statistically significant when included in Dr. Netz’s model?) and whether the *aggregate* overcharge estimated by Dr. Netz’s model changed substantially with their addition. Since both of these were true, the empirical test indicates that her model excludes major market factors.

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<sup>29</sup> ABA Section of Antitrust Law, *Proving Antitrust Damages: Legal and Economic Issues*, (2D ED. 2010), pp. 154, 177 cited in Guerin-Calvert Daubert Declaration, ¶ 12.

<sup>30</sup> See, e.g., James H. Stock and Mark W. Watson, *Introduction to Econometrics*, 3rd edition, Addison Wesley, 2011, pp. 319-320 (Starting off with “a base regression specification, the starting point of your empirical regression analysis, and a list of additional ‘questionable’ [candidate] variables that might help to mitigate possible omitted variable bias. The third step is to augment your base specification with the additional questionable control variables identified in the second step. If the coefficients on the additional control variables are statistically significant or if the estimated coefficients of interest change appreciably when the additional variables are included, then they should remain in the specification and you should modify your base specification.” (Emphasis added))

<sup>31</sup> Guerin-Calvert Daubert Declaration, § III.B. See also Guerin-Calvert 2014 Surrebuttal Report, ¶ 30 (“In the context of Dr. Netz’s overcharge model, the omission of the dummy variables for 1995 and 1996, (as well as other relevant variables such as shipping costs, desktop shipments, exchange rates and labor costs) and the substantial reduction in the overcharge estimate when such variables are added to Dr. Netz’s analysis, provide strong evidence that her estimates of overcharges are biased and unreliable.” (Emphasis added))

*Significant Market Factors Ignored by Dr. Netz or Omitted from Dr. Netz's Model - Demand Spike and Capacity Constraints in 1995/96 and Shipping Costs, Exchange Rates, Labor Costs, Shipments of Desktop Computers and Sales at Electronic Stores*

27. CDT demand and prices increased sharply in the early years of the class period,<sup>32</sup> driven by the introduction of Windows 95 and the expanding functionality and performance of desktop computer hardware and software which led to high demand for larger size and higher resolution monitors and CDTs.<sup>33</sup> Also contributing to the price hike was a shortage of CDT capacity at the time.<sup>34</sup> Nothing in Dr. Netz's model accounts for this demand shock or capacity constraints. I accounted for the spike in CDT demand and the lack of capacity at the time by adding indicator variables for 1995 and 1996 to Dr. Netz's CDT overcharge model.<sup>35</sup>

28. I identified additional market factors missing from Dr. Netz's CDT overcharge model based on CRT market facts, the evidentiary record and economic logic. For example, I identified the cost of shipping as a relevant market factor since CDTs and computer monitors tend to be heavy, bulky products that were often shipped substantial distances across countries.<sup>36</sup> Dr. Netz's CDT overcharge model does not account for changes in

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<sup>32</sup> Data analyses using price index and graphics show that CDT prices increased sharply between Q4 1994 and Q2 1996 and then decreased sharply after that. (See, Guerin-Calvert 2014 Report at Figure 11 for a Fisher Price Index and trends in CDT prices.) These early years are critical for the CDT overcharges estimated by Dr. Netz. As I have explained previously, Dr. Netz's damages model estimates positive and significant overcharges only for 1995 and 1996. (See Guerin-Calvert 2014 Report, Table 6.)

<sup>33</sup> Guerin-Calvert 2014 Report, ¶ 62 (citing to trade press reports at the time). For example: "Distributors said 15-inch monitors already are in short supply, yet the demand continues to skyrocket. The 15-inch and 17-inch models are replacing 14-inch screens as the standard, and their popularity is expected to grow with the planned August release of Microsoft Corp.'s Windows 95." (Pereira, Pedro, "Higher monitor prices looming -- Shortages of cathode ray tubes, higher production costs in Japan taking a toll," Computer Reseller News, 10 April 1995; <http://global.factiva.com> (accessed 27 July 2014 and cited in Guerin-Calvert 2014 Report, ¶ 62).)

<sup>34</sup> Guerin-Calvert 2014 Report, ¶ 63.

<sup>35</sup> See, e.g., Guerin-Calvert 2014 Report, ¶ 114 and Table 6. Econometric textbooks recognize that this is an appropriate method to account for time-period specific changes. See, e.g., James H. Stock and Mark W. Watson, *Introduction to Econometrics*, 3rd edition, Addison Wesley, 2011, pp. 359-360.

<sup>36</sup> Guerin-Calvert 2014 Report, ¶ 125.

shipping cost. Her model also fails to account for changes in exchange rates despite the significant international trade flows related to CRT monitors and CDTs. I identified the Korean Won-U.S. dollar exchange rate as a proxy for the exchange rates relevant to CDTs since Dr. Netz's glass cost variable reflects glass prices in Korea. Basic economic forces of supply and demand suggest that changes in exchange rates and shipping costs would likely affect prices of CDTs.<sup>37</sup> Moreover, Dr. Netz's model lacks a direct control for the demand for CRT monitors. I identified worldwide quarterly shipments of desktop computers as a way to control for demand for CDTs.<sup>38</sup>

29. Dr. Netz's CDT overcharge model and the data she relies on indicate that the market factors that I have identified are, in fact, relevant for CDT prices since they are individually or jointly statistically significant when they are added to her overcharge model.<sup>39</sup> Moreover, their addition to Dr. Netz's CDT overcharge model significantly alters her results, changing the estimated overcharge for the March 1995-2006 period from 22% to 1.6%, a change of more than 90%.

30. The substantial change in her overcharge estimates when relevant controls for market factors are added to her CDT overcharge model is evidence that these market factors—which Dr. Netz omits from her model—were important determinants of CDT prices and their influences on CDT prices were not otherwise captured by Dr. Netz's model. In doing so, Dr. Netz's model misattributes the effects of changes in major market unrelated to the alleged cartel to the alleged cartel.

31. A similar test was conducted for Dr. Netz's CPT overcharge model with similar results.<sup>40</sup> Specifically, the following supply-side market factors were added to Dr. Netz's CPT overcharge model because they were lacking in her model: a global shipping cost index (because Dr. Netz claims that a substantial volume of CPTs were shipped across

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<sup>37</sup> Guerin-Calvert 2014 Report, ¶ 125.

<sup>38</sup> Guerin-Calvert 2014 Report, ¶ 124.

<sup>39</sup> See e.g., Guerin-Calvert 2014 Report, ¶¶ 124-125.

<sup>40</sup> See e.g., Expert Report of Robert D. Willig, August 5, 2014 (hereafter "Willig 2014 Report"), ¶¶ 100-101.

countries)<sup>41</sup>, an index of labor cost in Korea (because labor costs were an important component of the manufacture of CPTs)<sup>42</sup>, the Korean Won-U.S. dollar exchange rate (because exchange rate fluctuations likely affected the cost of importing CPTs and TVs from Korea to the U.S., for example) and U.S. electronics retail stores as a proxy for TV demand (since Dr. Netz did not have a direct control for the demand for TVs and CPTs).<sup>43</sup> The added market factors were statistically significant and, moreover, their addition to Dr. Netz's CPT model caused the estimated CPT overcharge for the Q2 1995-Q4 2006 to change from 9% to 2.3%.<sup>44</sup> Thus, as with CDTs, Dr. Netz's overcharge model for CPTs fails this test of reliability because the model clearly fails to control for major market factors.

*Dr. Netz's Reply Declaration Fails to Refute The Test of Omission of Major Market Factors*

32. In her Daubert reply declaration, Dr. Netz does not dispute that: (a) the variables added in my reports relate to demand and cost factors relevant for prices of CRTs; (b) they are statistically significant when included in her model (i.e., the data show that they have an impact on CRT prices that is not due to chance alone); and (c) the inclusion of these market factors cause statistically and economically significant changes to her results that are not otherwise accounted for (e.g., overcharges of 1.6% instead of 22% for CDTs and 2.3% instead of 9% for CPTs between Q2 1995 and Q4 2006).

33. Instead, Dr. Netz's only other responses are: (a) the market factors that I identified are of "questionable relevance"<sup>45</sup> and (b) her analysis cannot be missing major market factors because her model explains at least 95% of the variation in prices of CRTs.<sup>46</sup>

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<sup>41</sup> Expert Report of Janet S. Netz, Ph.D., April 15, 2014 (hereafter "Netz 2014 Report"), p. 74.

<sup>42</sup> Willig 2014 Report, ¶ 100.

<sup>43</sup> Ibid.

<sup>44</sup> Willig 2014 Report, ¶ 101.

<sup>45</sup> Netz 2023 Declaration, p. 6.

<sup>46</sup> Netz 2023 Declaration, p. 7.

a) *Relevance of omitted market factors:*

34. When Dr. Netz attempts to explain why the additional market controls considered in my reports are of questionable relevance, she refers specifically to exchange rates, the shipping cost index and sales at electronics stores.<sup>47</sup> She makes no attempt to provide similar explanations or claims about the other market factors (i.e., labor costs in Korea and desktop shipments) that I added to Dr. Netz's model. Even in the context of the three factors that she appears to question, Dr. Netz does not claim that they have no relevance for CRT pricing—merely that they have certain imperfections or (inaccurately) that they have already been taken into account by her model.<sup>48</sup>

35. For example, she contends that there is no need to control for changes in exchange rates since she expresses all prices in U.S. dollars (USD).<sup>49</sup> This ignores the fact that some supply contracts were set in non-USD currency terms. At least some Korea-based vendors' supply contracts set prices in Won. Hence, changes in the exchange rate of the U.S. dollar against the Won was likely to lead to changes in dollar-denominated CRT prices.<sup>50</sup>

36. The fact that the Korean won-USD exchange rate is statistically significant (either singly or jointly with the other added market factors) when included in Dr. Netz's model is strong evidence of its relevance.<sup>51</sup> In other words, if her conversion of prices to USD

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<sup>47</sup> Netz 2023 Declaration, pp. 5-6.

<sup>48</sup> Netz 2023 Declaration, pp. 5-6.

<sup>49</sup> Netz 2023 Declaration, p. 5.

<sup>50</sup> About 42% of SDI's sales were denominated in Won during the 1998-2007 period for which SDI sales data are available in the data used by Dr. Netz to estimate overcharges. (Willig 2014 Report, fn. 112.) To take a hypothetical example, suppose a Korean supplier had a contract with a buyer in the U.S. for CPTs priced at 1000 Korean Won per CPT when the exchange rate was 100 Won per dollar in period 1. The sales would appear in the data used by Dr. Netz with a price denominated in Korean Won and she would designate the dollar price to be \$10 USD per CPT. Suppose later in period 2, the Won depreciated against the USD such that the exchange rate was 200 Won per USD and the Won price of a CPT remained unchanged at 1000 Won. In period 2, Dr. Netz would recognize a CPT price of \$5 per CPT. In this example, the CPT prices in both periods were designated in Won and the change in exchange rate led to a change in the price. Hence, the mere fact that Dr. Netz converted all prices into USD does not eliminate the influence of exchange rates.

<sup>51</sup> Guerin-Calvert 2014 Surrebuttal Report, ¶ 38; Willig 2014 Report, fn. 114.



was sufficient to account for this market factor, then the application of the controls factor for exchange rate variation would have no statistically significant effect. But it does. The same conclusion applies to all market factors applied to Dr. Netz's model.

37. As for the shipping cost index, Dr. Netz implies that a fuel cost index would be a better metric of costs but does not deny the relevance of shipping costs for CRTs that are traded and transported across oceans.<sup>52</sup> Although she appears to advocate for the use of fuel costs, she does not deny the relevance of shipping costs nor does she deny that the index of shipping costs included in my report is statistically significant. And although she cites to testimony by Professor Willig about sales at U.S. electronic stores including products other than CRT TVs, she does not explain why that matters as long as this variable is correlated with demand for CRT TVs.<sup>53</sup> In any event, as noted already, all market factors added to Dr. Netz's model are individually or jointly statistically significant,<sup>54</sup> which is indicative of their relevance to CRT pricing, as indicated in an econometrics textbook cited by Dr. Netz.<sup>55</sup>

b) *Ability to explain a large fraction of CRT price variation:*

38. Dr. Netz claims that her damages model must not exclude major market factors because it fits the data well, i.e., it explains at least 95% of the variation in CRT prices.<sup>56</sup> However, as I detailed in my report, the additional market factors that I included in Dr. Netz's model reduce the unexplained portion of CRT price movements by approximately

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<sup>52</sup> Netz 2023 Declaration, p. 6.

<sup>53</sup> Netz 2023 Declaration, p. 6. Her response that U.S. electronics stores include other products besides CRT TVs makes no sense. By that argument, she should not have included OECD output as a control because it includes more than CRT TVs.

<sup>54</sup> Guerin-Calvert 2014 Surrebuttal Report, ¶ 38; Willig 2014 Report, fn. 114.

<sup>55</sup> An econometrics textbook cited by Dr. Netz (Netz 2023 Declaration, pp. 4 and 9, at fns. 19 and 45, citing Peter Kennedy, *A Guide to Econometrics*, 6th ed, Wiley-Blackwell, 2008 (hereafter "Kennedy, A Guide to Econometrics")) explains that one way to test for the omission of a relevant variables from a regression model is to include it in the model and test for its statistical significance. If it is significant, then its exclusion from the model leads to omitted variable bias. (Kennedy, A Guide to Econometrics, pp. 153-154). Put differently, the variable is relevant for explaining the subject of interest (in this case, prices of CRTs).

<sup>56</sup> Netz 2023 Declaration, p. 7.

37 percent, which is both statistically and economically significant.<sup>57</sup> In any case, it is more important that a damages model provide an economically reasonable, unbiased and consistent estimate of the overcharge than for it to explain more variation in the relevant prices.

39. As discussed, my findings demonstrate that much of the effect that Dr. Netz's model attributed to the alleged cartel was, in fact, the influence that the omitted major market factors had on CRT prices. Her model's estimates of overcharges are therefore biased and unreliable, and the ability of her unreliable model to explain a high fraction of the variation of CRT prices does not remedy its bias due to omitted major market factors.

#### **IV. Dr. Netz's overcharge model continues to rest on the demonstrably false assumption that overcharges were uniform over long periods of time**

##### **A. Dr. Netz's own analysis contradicts her assumption that overcharges were uniform across almost 12 years of the class period, demonstrating her model is unreliable**

40. As I have explained previously, Dr. Netz's overcharge model is based on the assumption that overcharges are uniform for nearly all of the 13-year class period, i.e., between Q2 1995 and Q4 2006.<sup>58</sup> In her most recent declaration, Dr. Netz appears to deny making this assumption.<sup>59</sup> However, in her prior testimony Dr. Netz readily embraced it:

The best we can do is come up with an informed estimate, and my informed estimate is that for any day between 1995 and 2006, purchasers of monitor, of the CRT monitor, paid an overcharge of 25 percent relative to what they would have paid had the defendants followed the law.<sup>60</sup> (Emphasis added)

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<sup>57</sup> Guerin-Calvert 2014 Surrebuttal Report, ¶ 41.

<sup>58</sup> Guerin-Calvert Daubert Declaration, ¶ 33 and fn. 56.

<sup>59</sup> Netz 2023 Declaration, p. 3 (“Defendants’ argument that my overcharge ‘model is built on the premise that a fixed, unwavering and constant overcharge...for the entire 12-year period from 1995 to 2006’ is a false characterization and ignores the primary purpose of the model. The characterization is false because it insinuates that the model assumes that each class member suffered the same overcharges over the entire period.”)

<sup>60</sup> Deposition of Janet S. Netz, Ph.D., June 27, 2014, at pp. 113-114. (The 25% estimate was later corrected by Dr. Netz to be 22% after discovering an error in her initial analysis.)

41. As I explained in my Daubert Declaration, the assumption of uniform cartel impacts is inconsistent with the enormous changes evident in the CRT marketplace during the lengthy cartel period.<sup>61</sup> Until her most recent declaration related to the Daubert motion, Dr. Netz made no effort to test this strong and implausible assumption. As I further explained in my Daubert Declaration, I tested her assumption and I found that Dr. Netz's model estimates widely varying overcharges across sub-periods, i.e., Dr. Netz's data and model reject her assumption of uniform overcharges across the almost 12-year period between Q2 1995 and Q4 2006.<sup>62</sup> I further found that the aggregate overcharge estimated by her model modified to remove the assumption of uniform overcharges (averaged across sub-periods) is substantially lower than what she estimated originally.<sup>63</sup> I concluded that these tests of Dr. Netz's model are evidence that Dr. Netz's model omits key market factors that affect competitive conditions and the efficacy and estimated impact of the alleged cartel.<sup>64</sup>

42. In her most recent declaration in March 2023, Dr. Netz, herself, demonstrates that her model does not estimate uniform overcharges. Specifically, Dr. Netz segments the class period into various sub-periods and estimates separate overcharges for different sub-periods. In doing so, she reports very different overcharges for different periods. For example, Dr. Netz segmented the Q2 1995 – Q4 2006 period (which accounts for the bulk of the class period) into two sub-periods based on LCD penetration rates: (a) the Q2 1995-Q4 2005 period when she says LCD TV sales accounted for a minority of combined CRT TV-LCD TV sales, and (b) 2006 period when she says LCD TVs accounted for a majority of sales. Dr. Netz estimates CPT overcharges at 11.6% for the former period and 6.2% for the latter period. Thus, where she previously had assumed a uniform overcharge for this

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<sup>61</sup> Guerin-Calvert Daubert Declaration, ¶¶ 20-26.

<sup>62</sup> Guerin-Calvert Daubert Declaration, ¶ 31.

<sup>63</sup> Guerin-Calvert Daubert Declaration, ¶¶ 32-34.

<sup>64</sup> Guerin-Calvert Daubert Declaration, ¶¶ 32, 34.



entire period of Q2 1995 – Q4 2006, she now has revealed that the overcharge for the former period is *twice* the overcharge of the latter period.<sup>65</sup>

43. Thus, Dr. Netz’s own estimates of overcharges by sub-period contradict her assumption of uniform overcharges when she estimated her original damages model.

**B. Dr. Netz’s new analyses continue to assume uniform overcharges within long sub-periods of the class period—an assumption that is inconsistent with the evidentiary record and contradicted by her data**

44. Although Dr. Netz’s recent analysis contradicts her assumption of uniform overcharges during the 1995 – 2006 time period, she nonetheless claims that her initial model is reliable because she finds other segmentations of her analyses for each of CDT and CPT that leads to an aggregate average overcharge that is about the same as her initial model’s estimate.<sup>66</sup> She further contends that one of her segmentations of the class period is more reliable than my tests of segmentations of Dr. Netz’s model because it is based on identifiable market factors, whereas she contends that my segmentations of her model are ad hoc.<sup>67</sup> In the rest of this section, I explain why each of these claims is incorrect and/or misleading.

45. On the issue of sub-periods, *when Dr. Netz segments the class period into sub-periods, she repeats her initial mistake of assuming uniform overcharges over lengthy periods despite rapid changes in market conditions.* Specifically, when Dr. Netz segments the 1995 – 2006 time period into sub-periods, she does so by creating at least one sub-period that is between four years and almost 11 years long—much longer than the one to three year sub-periods of the Netz model that I tested and analyzed in my Daubert

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<sup>65</sup> Netz 2023 Declaration, Table 1. The difference is statistically significant. Dr. Netz has a separate analysis for CDTs, which includes a somewhat different bifurcation of the Q2 1995-Q4 2006 period. Dr. Netz’s estimates of overcharges aggregated across the full cartel period also varies depending on the segmentation of the class period. Segmenting into one, two and three-year segments also yields varying aggregate overcharges from those estimated by Dr. Netz in her original model as I showed (Guerin-Calvert Daubert Declaration, Tables 3-4).

<sup>66</sup> Netz 2023 Declaration, pp. 9-10. This is not the case for all of her reported segmentations nor for the ones that I estimate.

<sup>67</sup> Netz 2023 Declaration, pp. 8-9.

Declaration.<sup>68</sup> Dr. Netz continues to assume that the alleged cartel had a uniform impact within each of these long sub-periods despite the fact that market factors changed substantially within the windows defined by Dr. Netz in ways that likely affected competitive conditions and the potential impact of the alleged conduct.<sup>69</sup> And once again, she does not test that assumption. Critically, Dr. Netz does not address any segmentation that might consider relevant market changes in the 1995-98 period; doing so indicates her analysis as flawed and unreliable. This lack of testing within long periods is especially an issue for Dr. Netz's preferred segmentation for CPTs: almost 11-years (Q2 1995-Q4 2005), which is only one year shorter than the almost 12-year segmentation used in her initial analysis (Q2 1995-Q4 2006).

46. Take for instance Dr. Netz's preferred segmentations based on the extent of LCD penetration. Dr. Netz divides the class period into three segments. The first of these is the period when sales of finished products (i.e., TVs or monitors) using LCDs accounted for a "minority" of the combined total sales of CRT and LCD finished products ("Period 1"). In this segmentation by Dr. Netz, Period 1 is almost 11 years long for CPTs and almost seven years long for CDTs. Dr. Netz's analysis and conclusion rest on the assumption that within these long windows of time, the alleged cartel had a uniform impact on CRT prices. As in her original model where she assumed a uniform impact during the entire class period except for 2007, Dr. Netz provides no support for her assumption of uniform cartel impacts during sub-periods as long as almost 11 years. And as before, Dr. Netz does not test her assumption.

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<sup>68</sup> Guerin-Calvert Daubert Declaration, ¶ 31. Dr. Netz segments the Q21995-Q4 2006 into four-year sub-periods and six-year sub-periods. Additionally, she also segments CPTs into a Q21995-Q4 2005 sub period and a one-year sub-period (2006), and CDTs into a Q21995-Q4 2002 sub period and Q1 2003- Q4 2006 sub-period (2006).

<sup>69</sup> Dr. Netz assumes a uniform cartel impact for each sub-period that she considers because her revised model has just one cartel indicator dummy variable for each sub-period of the class period and that indicator variable is used to estimate a single overcharge for that sub-period. This is evident in Tables 1,3 and 4 in her 2023 Declaration. This is consistent with her analysis of overcharges for the entire class period in her original model where she had a single cartel dummy for the Q2 1995-Q4 1996 period (and another for 2007) and testified that the former estimates a uniform overcharge over the length of that period.

47. The record shows however that there were substantial changes in market conditions within the time segments considered by Dr. Netz. For example, during Period 1 (the period when LCD penetration was below 50%), she assumes that the overcharge is the same in Period 1 regardless of the LCD share, i.e., she assumes, without testing, that whether LCD share is 0.1% or 50% is irrelevant for the estimated overcharge. Dr. Netz does not allow the LCD share to affect the cartel's impact until it crosses the 50%. She provides no explanation for this implausible assumption. Dr. Netz's model when estimated using an annual segmentation of the class period, which I provide in my previous declaration, demonstrates that overcharges estimated by Dr. Netz's model varied substantially and statistically significantly within Period 1.<sup>70</sup>

48. Market factors other than LCD shares also changed materially during the lengthy Period 1 defined by Dr. Netz. For example, as shown in Figure 1, during the ten years of Dr. Netz's Period 1 for CPTs, global shipping costs (a market factor not included in Dr. Netz's model) first decreased by 50% (between 1995 and late 1998) and then increased to a level that was more than double its level at the start of Period 1. Figure 1 and Figure 2 shows substantial changes of other market factors within Period 1 for CPTs and CDTs, respectively.<sup>71</sup>

49. Given the substantial changes in market conditions within any of the lengthy periods examined by Dr. Netz, it is implausible that the effects of the alleged cartel were uniform within these windows. Again, Dr. Netz provides no support for that assumption, nor does she test for it. When I test her model on these grounds, it fails.

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<sup>70</sup> Guerin-Calvert Daubert Declaration, Table 3 and 4.

<sup>71</sup> Market conditions also changed substantially during Dr. Netz's shorter segmentations (four-year and six-year windows) of the 1995 – 2006 time period. For example, in the four-year window between 1995 and 1998 (which is one of the segments defined by Dr. Netz), the US Dollar more than doubled in value vis-à-vis the Korean Won and shipping costs declined by 50%. Dr. Netz does not control for either of these market factors. Market conditions changed even more for the six-year segmentation analyzed by Dr. Netz. (For example, shipping costs ranged more widely during the six years after the start of the class period than during the four years after the start of the class period.)

50. Specifically, I tested Dr. Netz's assumption of uniform overcharges by allowing the overcharge estimated by Dr. Netz's model to vary by year, for example, allowing it to vary across the years *within* Period 1 defined by Dr. Netz in her most recent declaration. And, as reported in my Daubert Declaration, the revised model shows that overcharges varied substantially year-to-year.<sup>72</sup> For example, Dr. Netz's CPT model estimates overcharges of 7.6%, 5.6% and 0.1% for 1995, 1996, and 1997 respectively, and it estimates negative overcharges for all the remaining years in Period 1.<sup>73</sup>

51. By now presenting only lengthy sub-periods, Dr. Netz repeats her previous issue of assuming uniform overcharges over multiple years, ignoring substantial changes in market conditions. When her model is allowed to estimate overcharges that vary over shorter time periods (consistent with the evidence of frequent changes in market conditions), her model estimates an aggregate overcharge that is vastly different from Dr. Netz's initial model.

52. This reveals that the estimates of class-period overcharges based on the revised models that Dr. Netz proffers in her most recent declaration are equally unreliable as her original, since they too are based on an assumption that is demonstrably inconsistent with the data she employs.

**C. Dr. Netz's segmentation based on market changes is ad hoc and misleading; a fuller treatment of market changes using Dr. Netz's model yields estimates of aggregate overcharges substantially different from her initial estimates**

53. In her most recent declaration response, Dr. Netz contends that my segmentations of the class period (one-year, two-year and three-year) are ad hoc and not based on any economic or market factors.<sup>74</sup> Dr. Netz further claims that her segmentation of the class period based on LCD share is based on an identifiable change in market conditions and hence more reliable than my segmentations of the 1995 – 2006 time period for testing Dr.

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<sup>72</sup> Guerin-Calvert Daubert Declaration, ¶ 25.

<sup>73</sup> Guerin-Calvert Daubert Declaration, Table 4.

<sup>74</sup> Netz 2023 Declaration, pp. 8-9.

Netz's model and associated conclusions and she claims that this segmentation supports her initial overcharge model and estimates.<sup>75</sup>

54. Dr. Netz's claims are misleading and incorrect for multiple reasons:

- a. Dr. Netz's critique that my segmentations of the class period are not based on identifiable market factors is misguided since I proposed the segmentation with the intention of testing Dr. Netz's assumption of uniform overcharges—not as specific turning points in the effectiveness of the cartel.<sup>76</sup> As long as relevant market conditions are changing frequently (e.g., from year to year), segmenting into short time period such as one or two-year windows, for example, provides a test of Dr. Netz's assumption. Segmenting into longer windows—as Dr. Netz did—would impose the assumption that market conditions were stable over long periods of time.<sup>77</sup>
- b. If Dr. Netz's segmentation based on LCD shares yields similar results to her original overcharge estimates, it is only because—as explained above—her new time structure makes the same error that her original model does, i.e., it assumes that cartel effects were uniform for long periods of time despite abundant evidence that key market factors changed substantially during the period.
- c. Dr. Netz's LCD share-based time structure is unreliable for another reason: it is arbitrary. Specifically, the new time structure that she contends has an economic

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<sup>75</sup> Netz 2023 Declaration, p. 9.

<sup>76</sup> The intention of my segmentation analysis is clearly stated in my Daubert Declaration as a test of Dr. Netz's assumption. See Guerin-Calvert Daubert Declaration, ¶ 25 (“I also tested Dr. Netz's assumption of uniform overcharges by allowing her model to estimate differential overcharges for each year of the alleged cartel period. Professor Willig did likewise. We explained that—at least according to Dr. Netz's own model—the data used by Dr. Netz rejects her assumption of uniformity.”)

<sup>77</sup> This is why I did not report results from segmenting the class period into six-year periods. Dr. Netz refers to finding an analysis related to six-year windows in my supporting materials, but as explained in this declaration, there are sound reasons for not relying on such a long segmentation in a market where conditions were changing rapidly.



foundation is based on changes in just one market condition: LCD shares.<sup>78</sup> In effect, she assumes that the only material change in market conditions occurred when the LCD share exceeded the 50% mark. Dr. Netz ignores many other material changes in the CRT market during the relevant time period.

- i. For example, as explained above in Section III.B, the demand for CDTs and prices of CDTs increased rapidly in 1995 and 1996 due to the introduction of Windows95 and the expanding functionality and performance of desktop computer hardware and software. Nothing in Dr. Netz's original model or her new segmented approach accounts for this demand shock. Rapid increases or decreases in demand could affect cartel stability and its efficacy, as economists have explained.<sup>79</sup>
- ii. The Asian currency crisis in 1997 – 1998 is another significant market event not controlled for by Dr. Netz that potentially impacted cartel efficacy and also likely had a direct effect on CRT prices. During the crisis, the currencies of several Asian countries that were CRT manufacturing hubs depreciated significantly against the dollar.<sup>80</sup> The depreciation likely would have impacted CRT prices. It also likely impacted the efficacy of the alleged cartel. Economists have shown that exchange rate shocks can destabilize international cartels.<sup>81</sup>

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<sup>78</sup> Additionally, despite claiming that the one, two, and three-year sub-periods analyzed in my Daubert Declaration represent arbitrary cutoffs, there is no reason to expect that cartel effectiveness fundamentally changed precisely when LCD shares crossed the 50% threshold. That is, Dr. Netz does the same thing for which she criticizes my analysis of her model.

<sup>79</sup> See, e.g., Julio J. Rotemberg and Garth Saloner, "A Supergame-Theoretic Model of Price Wars during Booms," *The American Economic Review*, Vol. 76, No. 3. (Jun., 1986), pp. 390-407.

<sup>80</sup> Figure 1 and Figure 2 show the depreciation of the Korean Won against the U.S. dollar around this time period.

<sup>81</sup> See, e.g., Barbara J. Alexander, "The Impact of Exchange Rate Levels and Changes on International Cartels: Implications for Liability and Overcharges," *Antitrust Law Journal*, Vol. 70 (2003), pp. 819-846.

- d. To provide an additional test of the impact of these market factors solely in the context of Dr. Netz's new LCD share-based segmentation, I extended Dr. Netz's LCD-share based segmentation of her model to account for the Asian currency crisis in 1997-98 to create a five-period segmentation for CPTs and extended it to account for the Windows 95-related changes in demand for CDT markets and for the Asian currency crisis to create a six-period segmentation of the class period.<sup>82</sup> (I retained the segmentation created by Dr. Netz which accounts for the LCD share of TVs and monitors.) I do not intend this analysis to account for *all* major changes in the CRT markets during the class period. Instead, this minor modification is meant to include more market events than just the one that Dr. Netz considered in her LCD share-related analysis and thereby test the reliability of Dr. Netz's contention that a particular segmentation of the class period that she claims is grounded on economic factors yields similar estimates of aggregate overcharges as her original model.
- e. Dr. Netz's model fails this test. Figure 3 shows the results from estimating Dr. Netz's overcharge model after further segmenting the class period so that it accounts for just the one or two more market events (Windows 95 and the Asian currency crisis) than the one market event (i.e., when LCDs accounted for a majority of finished products) considered by Dr. Netz. As depicted there, with the

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<sup>82</sup> For CDTs, the sub periods are: (i) Q2 1995-Q4 1995; (ii) 1996 (each with its own dummy indicator variable- to account for the effects of Windows 95 and other sources of changes in CDT demand that I explained in my previous reports); (iii) 1997 and 1998 (each with its own dummy indicator variable-to account for the Asian currency crisis); (iv) 1999-2002 (a single dummy indicator variable to indicate no identifiable market events); (v) 2003-06 (for the period after LCD monitors accounted for the majority of monitors sold worldwide) and (vi) 2007 (for the period after regulators acted against alleged cartel members).

For CPTs, the sub periods are : (i) Q2 1995 and 1996 (no identified event although the increased demand for CDTs could have impacted CPTs inasmuch as there Dr. Netz claims there was some supply-side substitution between CPTs and CDTs); (ii) 1997 and 1998 (each with its own dummy indicator variable-to account for the Asian currency crisis); (iii) 1999-2005 (a single dummy indicator variable to indicate no identifiable market events); (iv) 2006 (for the period after LCD monitors accounted for the majority of monitors sold worldwide) and (v) 2007 (for the period after regulators acted against alleged cartel members).

one additional event for CPTs (the Asian currency crisis) and two additional events for CDTs (the Asian currency crisis and the demand spike in 1995-96),<sup>83</sup> the overall aggregate overcharge for the class period (averaged over the sub-periods) is 4.4% for CPTs and -10.9% for CDTs.<sup>84</sup> They are economically and statistically significantly different from the overcharges estimated by Dr. Netz using her three-period structure based on just LCD shares (11.3% for CPTs and 23% for CDTs). Moreover, the overcharge estimates for the individual periods show the same pattern, which is a varying overcharge across the periods.

55. In sum, attempting to segment the class period based on a single identifiable market event selected by Dr. Netz fails to address the fundamental issues with Dr. Netz's damages model. The model is unreliable because it excludes relevant major market factors and because it assumes that overcharges are uniform across time.<sup>85</sup>

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<sup>83</sup> When CDTs are analyzed with just the Asian currency crisis as an additional event (to the LCD event), the results are not qualitatively different from those reported in Figure 3. Specifically, there is significant variation in estimated overcharges within Period 1 and the aggregate class-period overcharge (-10.5%) is significantly different from the overcharge estimated by Dr. Netz in her initial model which did not segment the Q2 1995-2006 period (22%). Similar results are obtained if the only additional event (to the LCD event) for CDTs is the demand spike in 1995-96 due to the introduction of Windows95 and related events. (This is shown in supporting materials produced with this declaration.)

<sup>84</sup> When Dr. Netz's model is modified to allow it to estimate overcharges that vary over time, it sometimes estimates negative overcharges. This is not an indication that the alleged conduct reduced prices of CRTs at times. Instead, it indicates that Dr. Netz's model fails to control for market factors that sometime reduced prices—changes such as the appreciation of the US Dollar against Asian currencies during the Asian currency crisis of 1997-98. Consequently, her model conflates price effects of changes in market conditions with cartel effects.

<sup>85</sup> Dr. Netz claims that this test of the reliability of her model suffers from an issue economists term “multicollinearity of explanatory variables” and hence is unreliable. Netz 2023 Declaration, pp. 10-11. However, Dr. Netz fails to quantify the impact of multicollinearity (if any) on the precision of the estimates of time varying overcharges. In effect, she merely claims that multicollinearity is potentially an issue that could perhaps materially reduce the precision of my estimates of time-varying overcharges in her model. She makes no effort to confirm that multicollinearity is a material problem in this context.



**V. Dr. Netz’s various additional defenses of her overcharge model’s reliability fail to address the issues with the model**

56. Dr. Netz claims that (a) her overcharge estimates are consistent with academic work on the estimated overcharges for a sample of cartels;<sup>86</sup> (b) her results are consistent with “case evidence” that the alleged members knowingly bore the costs and the legal risks associated with cartel conduct, which they would not have done unless they expected to be able to elevate prices;<sup>87</sup> (c) her results are robust against “reasonable changes” in demand variables, supply variables and cartel periods;<sup>88</sup> and (d) her results are “economically and statistically significant.”<sup>89</sup>

57. Each of these responses is incomplete, misleading and inconsistent with the evidence in the instant matter and standard econometric practice. They fail to address the central issue: whether her omission of major market factors renders her analysis unreliable.

*a) Academic estimates of cartel effects:*

58. Dr. Netz contends that her model is reliable because the overcharges estimated by her model are consistent with academic studies.<sup>90</sup> Specifically, she cites to a paper that surveys various studies that estimate the price effects of a large number of identified cartels. Since the author finds that the median price overcharge by these cartels is about 23%, Dr. Netz claims that her estimates of CDT overcharges (22% for Q2 1995-Q4 2006) and CPT overcharges (9% for Q2 1995-Q4 2006) are “reliable and supported by academic work on cartel overcharges.”<sup>91</sup>

59. However, the survey that Dr. Netz relies on is not confined to industries and cartels similar to the alleged CRT cartel or even recent time periods. It encompasses a wide range of cartels in a large variety of markets over a very long time period. For example, it includes

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<sup>86</sup> Netz 2023 Declaration, pp. 7-8.

<sup>87</sup> Netz 2023 Declaration, p. 7.

<sup>88</sup> Netz 2023 Declaration, p. 8.

<sup>89</sup> Netz 2023 Declaration, p. 7.

<sup>90</sup> Netz 2023 Declaration, pp. 7-8.

<sup>91</sup> Netz 2023 Declaration, p. 8 (citing a survey of cartels).

a cordage, sisal and hemp cartel in 1878-1881, a sulfur cartel in 1922-1940, Tungsten carbide cartel in 1928-1941, among others. Dr. Netz fails to explain the relevance of these old and unrelated cartels to the alleged CRT cartel and for assessing the reliability of her model.

*b) Consistency with case evidence:*

60. Dr. Netz's claim on this topic is mainly that the alleged cartel members must have expected to increase prices and profit from the cartel since they expended significant resources to organize and maintain the alleged cartel and they knowingly took on the legal risks associated with such conduct.<sup>92</sup> However, this ignores the relevant question for the reliability of Dr. Netz's model. The relevant question is not whether the alleged conduct was able to raise prices at all. Instead, the question is whether Dr. Netz's model and its estimated overcharges of 22% for CDTs and 9% are reliable.

61. The substantial volume of commerce involved (about \$66.6 billion for CDTs and \$136.4 billion for CPTs during the class period),<sup>93</sup> implies that much smaller overcharges than the ones estimated by Dr. Netz would also involve a substantial payout for alleged cartel members. Dr. Netz provides no answer as to whether this or any specific amount would have been sufficient for the costs and risks associated with the alleged conduct and, more generally, she provides no means of identifying the overcharges that would theoretically have been needed to compensate members of the alleged cartel for the costs and risks borne by them. More importantly, the mere fact that members of any alleged cartel would have expected to have increased prices (here of CRTs) provides no economic or empirical support for any overcharge level or the specific overcharges estimated by Dr. Netz. Nor does it refute the evidence that Dr. Netz's model omitted major market factors.

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<sup>92</sup> Netz 2023 Declaration, p. 7.

<sup>93</sup> These figures are obtained by dividing Dr. Netz's annual estimates of the IPP class's CDT and CPT expenditures (Netz 2014 Report, Exhibit 80) by her annual estimates of the IPP class's share of global CDT and CPT revenues (Netz 2014 Report, Exhibit 79) and summing the results over the class period.

c) *Robustness tests performed by Dr. Netz:*

62. Dr. Netz contends that her estimates of overcharges are robust against “reasonable changes” in demand variables, supply variables and cartel period.<sup>94</sup> None of these “reasonable changes” cited by Dr. Netz includes an effort to account for additional major market demand and cost factors. Instead, Dr. Netz merely considered minor changes to her already-included market demand and cost factors, such as adding lagged values of the demand factors that she employs.<sup>95</sup> The fact that minor modifications to her incomplete market factors have no effect on her estimated overcharges fails to disprove that her model excludes major market factors. It is the omitted market factors that are the issue here. As I have explained above, Dr. Netz does not deny that adding the market demand and cost factors that I identified to her model substantially alters her estimated overcharge.

d) *The economic and statistical significance of overcharges estimated by Dr. Netz:*

63. The significance of her overcharge estimates does not establish their reliability. They are significant at least in part due to Dr. Netz’s analysis conflating the price effects of changes in market conditions unrelated to the alleged conduct with the price effects of the alleged conduct. This error due to the omission of major market factors from her model causes it to estimate inflated overcharges. Effectively, Dr. Netz proposes to rescue her analysis by relying on the fact that its flaws cause it to substantially over-estimate overcharges instead of marginally over-estimating overcharges.

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<sup>94</sup> Netz 2023 Declaration, p. 8 at fn. 42, citing Exhibit 65 of the Netz 2014 Report.

<sup>95</sup> Id. Although in her Daubert reply report Dr. Netz cites only to her initial merits report (Netz 2014 Report) to support her claim that her overcharge model is robust against “reasonable changes” in the model, in her reply merits report, she also considers a fuel cost index as an additional cost variable and she finds that its addition to her model does not alter her estimated overcharges substantially. (Rebuttal Expert Report of Janet S. Netz, Ph.D., September 26, 2014 (hereafter “Netz 2014 Reply Report”), Exhibit RR-99.) However, this does not remedy the omission of key market factors since it has been shown that even with the fuel cost variable, the addition of the market factors that I have discussed above causes Dr. Netz’s model (with her fuel cost variable) to estimate a very different overcharges than the ones she estimates. (See Guerin-Calvert 2014 Surrebuttal Report at fn.56 and note viii in Table 1A, and Expert Surrebuttal Report of Robert D. Willig, November 6, 2014 (hereafter “Willig 2014 Surrebuttal Report”), at Exhibit 1.)

## **VI. Dr. Netz fails to establish that her overcharge analysis is consistent with price floor regulations in China**

64. Dr. Netz fails to refute that Chinese pricing regulations for some CPTs in effect at the time of the alleged cartel would have been a potential constraint on the Chinese CRT manufacturers' ability to implement the "but for" prices that her model suggests.

65. In my 2022 Supplemental Report, I showed that the but-for prices predicted by Dr. Netz's model for certain CPTs manufactured in China would have been below price floors announced by the Chinese government for those CPTs.<sup>96</sup> I explained that if these government regulations limited or influenced Chinese manufacturers' ability or incentive to charge prices below the Chinese government's price floors, Dr. Netz's failure to account for the effect of such price floors would cause her to misstate and overstate CPT overcharges for at least some CPTs.<sup>97</sup>

66. In her latest declaration, Dr. Netz claims that two of the three examples that I analyzed do not support the premise that that her but-for prices would have been below the Chinese government's price floors (she says the third example is ambiguous).<sup>98</sup> Dr. Netz also claims that, for the same two examples, properly calculated but-for prices would have been above the corresponding price floors announced by the Chinese government, and that thus the predictions of her CPT overcharge model are consistent with the existence of the Chinese government's price floors.<sup>99</sup> Those claims are inaccurate and I address them below.

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<sup>96</sup> Guerin-Calvert 2022 Supplemental Report, § III.C.

<sup>97</sup> Guerin-Calvert 2022 Supplemental Report, ¶ 30.

<sup>98</sup> Netz 2023 Declaration, pp. 13-14.

<sup>99</sup> Netz 2023 Declaration, pp. 13-14; Janet S. Netz, Ph.D. Rebuttal to Supplemental Expert Report of Margaret E. Guerin-Calvert and Expert Report of Donald Clarke, April 27, 2022, (hereafter "Netz 2022 Rebuttal Report"), p. 9. Dr. Netz also criticizes my price comparisons because they "were not for Irico." (Netz 2023 Declaration, pp. 13-14.) This criticism is a red herring. I understand that the Chinese government's price floors applied to all CPT manufacturers in China, and thus there is no specific relevance to just Irico in assessing the potential effects of the Chinese government's price floors on Dr. Netz's global CPT overcharge

(footnote continued ...)

**A. Dr. Netz's is incorrect in her claim that her CPT overcharge model is consistent with the Chinese government's price floors**

67. For two of the three examples of the Chinese government's price floors that I analyzed, Dr. Netz observes that the industry average costs reported by the Chinese government were for "regular flat" and "ultra-flat" CPTs, respectively, and from this asserts that "a proper comparison should include prices and costs only of flat CPTs."<sup>100</sup> Dr. Netz observes her calculated but-for prices for certain "flat" CPTs would have been above the corresponding Chinese government's price floors and concludes this demonstrates her CPT overcharge model is "consistent" with the price floors.<sup>101</sup> Dr. Netz does not perform the same comparison for the third price floor example because she claims it is unclear whether the reported cost was for "flat" CPTs, curved CPTs, or both.<sup>102</sup>

68. However, Dr. Netz's price comparisons are flawed because she does not account for the different categories of CPT flatness and how this affects price.<sup>103</sup> In other words, she based her comparisons on certain higher-cost products. In her most recent Declaration, Dr. Netz does not contest this critique of her analysis. Additionally, Dr. Netz's most recent declaration ignores testimony relevant to this critique from a March 7-9, 2023 deposition by Irico's Li Miao that occurred prior to the filing of her declaration (but after the filing of my most recent declaration).

69. The CPTs whose prices Dr. Netz incorrectly compared to the Chinese government price floors announced on September 13, 2000 for 21-inch and 29-inch CPTs include only

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estimates (which Dr. Netz assumes applied to CRT TVs purchased in the U.S) and their implied estimated but-for prices. Moreover, for assessing the implications of the Chinese government's prices floors for Dr. Netz's CPT overcharge model, it makes sense to use the data on which Dr. Netz relied on in that model.

<sup>100</sup> Netz 2022 Rebuttal Report, p. 9.

<sup>101</sup> Netz 2023 Declaration, pp. 13-14; Netz 2022 Rebuttal Report, pp. 9-10.

<sup>102</sup> Netz 2023 Declaration, pp. 13-14; Netz 2022 Rebuttal Report, pp. 9-10.

<sup>103</sup> Guerin-Calvert Daubert Declaration, ¶ 39.



“pure flat” CPTs.<sup>104</sup> This causes Dr. Netz’s analysis to be biased because “pure flat” CPTs are premium products with premium prices whose but-for prices were thus least likely to be below the announced price floors.<sup>105</sup> That is, Dr. Netz’s price comparisons provide no indication of whether her but-for prices for less flat—and therefore lower-priced—CPTs that were subject to the prices floors (e.g., “regular flat” and “ultra flat” CPTs) would have been below those floors. As a result, Dr. Netz’s two price floor comparisons do not show that the predictions of her CPT overcharge model are consistent with the Chinese government’s price floors.

**B. My analysis shows that the but-for prices predicted by Dr. Netz’s model would have been below the Chinese government’s price floors in at least some instances**

70. Unlike Dr. Netz, I did not limit my price comparisons to premium “pure flat” CPTs. Instead, I calculated the average but-for price predicted by Dr. Netz’s CPT overcharge model for *all* CPTs manufactured in China for the sizes subject to the Chinese

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<sup>104</sup> All of the CPTs included in Dr. Netz’s two price comparisons have the letters “PF” in their model number. A Panasonic/MTPD witness testified that the designation “PF” in the model number of the Panasonic sales data on which Dr. Netz relied for her analysis refers to “pure flat.” (Deposition of Tatsuo Tobinaga, July 16, 2012, p. 69. Mr. Tobinaga was referring to model numbers extracted from MTPD-0122906, which is the Panasonic/MTPD sales dataset that Dr. Netz relies upon for her overcharge and price floor comparison analyses.) Yet another indicator that Dr. Netz included only “pure flat” CPTs in her comparison is that the Panasonic data on which she relies does not categorize any CPTs as “flat”—which is her criteria for including a model in her price comparison—until 2000. (MTPD-0122906) This coincides with Panasonic’s introduction of “pure flat” CRTs. (In re Panasonic Corporation of North America, United States Patent and Trademark Office, Trademark Trial and Appeal Board, Serial No. 76414813, October 21, 2005.)

<sup>105</sup> For example, Irico’s Li Miao testified that “pure flat” CPTs, unlike “ultra flat” CPTs, are actually flat. (Deposition of Miao Li, March 7-9, 2023 (“Li (Irico) Deposition”), pp. 176, 306-307) Similarly, Dr. Netz has previously described “pure flat” CPTs as “truly flat.” Dr. Netz has acknowledged that flatter CPTs will generally have higher prices, (Deposition of Janet S. Netz, Ph.D., June 9, 2022 (hereafter “Netz 2022 Deposition”), pp. 37 and 40-41), indicating that “pure flat” CPTs are more expensive than less flat CPTs such as “regular flat” and “ultra flat” CPTs. (Dr. Netz has acknowledged that “regular flat” CPTs are less expensive than “ultra flat” CPTs (Netz 2022 Deposition, p. 40), which are less flat and thus less expensive than “pure flat” CPTs.) Another indicator that Dr. Netz included only premium products in her price comparison is that the actual prices for the 21-inch and 29-inch CPTs that Dr. Netz examined were 73% and 49% above the corresponding price floors.

government's price floors. The inclusion of all such products in my analysis is justified for at least two of the three price floor examples, with the third being ambiguous.

*Example 1: The Chinese government's price floor for 21-inch CPTs announced on April 2, 1999*

71. The Chinese government's announcement of this price floor reports the average industry cost for 21-inch "Color CRT,"<sup>106</sup> thus providing no indication that the announced cost was based on premium CPTs. To the contrary, the evidence indicates that it was based on the CPTs with the lowest production costs.<sup>107</sup> Thus, it was reasonable and conservative for me to include all 21-inch CPTs in my price comparison.<sup>108</sup>

*Example 2: The Chinese government's price floor for 21-inch CPTs announced on September 13, 2000*

72. Dr. Netz has observed that the industry average cost reported by the Chinese government for this price floor was for 21-inch "regular flat" CPTs.<sup>109</sup> The data underlying Dr. Netz's CPT overcharge model and thus its predicted but-for prices do not enable one to isolate "regular flat" CPTs. However, in a recent deposition, a former chief plant manager at an Irico CPT plant, Li Miao, explained that all of Irico's CPTs were called "regular flat," "ultra flat," or "pure flat" even though only "pure flat" CPTs were truly flat

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<sup>106</sup> "Notification of Publishing Industrial Average Production Costs for Some Types of Color CRT and Color TVs," MII-PRC, April 2, 1999, Certified Translation, Attached Table.

<sup>107</sup> Specifically, two months prior to the April 2, 1999 price floor announcement, the Chinese government sent CPT manufacturers a request for information on their production costs for 21-inch CPTs. ("Notification of Reporting Cost Information for Color TV and Color CRT Industry," MII-PRC, February 3, 1999, Certified Translation, pp. 1, 2, and 4.) The request included the following instruction: "if there are different models for the same size, the model with a lower cost shall be filled in the table." ("Notification of Reporting Cost Information for Color TV and Color CRT Industry," MII-PRC, February 3, 1999, Certified Translation, Attachment 3.)

<sup>108</sup> I am not aware of any evidence that the price floor was intended to be limited only to lower-quality products, but if it was, and if my price comparison includes higher-quality CPT products that were not subject to the price floor, then my analysis would understate the extent to which Dr. Netz's but-for prices were below the price floor, and my analysis would be conservative.

<sup>109</sup> Netz 2022 Rebuttal Report, p. 9.

(that is “regular flat” and “ultra flat” CPTs are curved despite being called “flat”).<sup>110</sup> To the extent that the CPTs manufactured in China that were included in my price comparison were also comprised of CPTs no more curved than “regular flat” CPTs—as was the case for Irico—my inclusion of all 21-inch CPTs for this price comparison would be apt.<sup>111, 112</sup>

73. In sum, my analysis shows the but-for prices predicted by Dr. Netz’s CPT overcharge model would have been below the Chinese government’s price floor for at least one (the Chinese government’s 21-inch price floor announced on April 2, 1999) and possibly all three of the price floors for which it was possible to conduct such a comparison using the data relied upon by Dr. Netz for her CPT overcharge model. Thus, as I explained in my 2022 Supplemental Report, if the Chinese government’s regulations limited or influenced Chinese manufacturers’ ability or incentive to price below the price floors, Dr. Netz’s failure to account for the effect of such price floors would cause her to misstate and overstate CPT overcharges for at least some CPTs.<sup>113</sup>

**C. Dr. Netz’s claim that the level of the price floors is ambiguous does not deny their relevance for assessing estimates of but-for prices of her damages model**

74. In my 2022 Supplemental Report, I compared Dr. Netz’s but-for prices for certain CPT products with the *average industry cost* for those products as reported by the Chinese government in conjunction with the Chinese government’s price floors.<sup>114</sup> Dr. Netz claims

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<sup>110</sup> Li (Irico) Deposition, pp. 176, 306-307. (I understand that counsel for Irico will be addressing the ambiguity of the translation of the witness’s testimony to “standard flat”; I have been asked to assume that “regular flat” and “standard flat” are synonymous.)

<sup>111</sup> It is not clear whether the price floor applied only to “regular flat” CPTs, or if it also applied to flatter CPTs as well. However, even if the latter were the case, my inclusion of all CPTs would cause me to understate the extent to which Dr. Netz’s but-for prices were below the price floor, and thus my analysis would be conservative.

<sup>112</sup> Dr. Netz has observed that the industry average cost reported by the Chinese government for the third price floor example I analyzed (the Chinese government’s price floor for 29-inch CPTs announced on September 13, 2000) was for 29-inch “ultra flat” CPTs. It is not possible to tell from the data underlying Dr. Netz’s CPT overcharge model and thus my price comparison whether any of the CPTs included in my analysis were more curved than “ultra flat” CPTs.

<sup>113</sup> Guerin-Calvert 2022 Supplemental Report, ¶ 30.

<sup>114</sup> Guerin-Calvert 2022 Supplemental Report, ¶¶ 24-26, 29.



that “the level of price floors is ambiguous in the documents used by Ms. Guerin-Calvert, with references both to a manufacturer’s cost and industry average costs.”<sup>115</sup> Dr. Netz appears to claim that it may have been more appropriate to compare estimated but-for prices with a manufacturer’s own cost than with the industry average cost. She has not performed such a calculation. Thus, if it were true that a manufacturer’s own cost is the relevant price floor, then Dr. Netz has no basis upon which to claim that my pricing comparisons “are inconsistent with [my] conclusions”<sup>116</sup> or that she has shown that her model “is consistent with the Chinese price floor.”<sup>117</sup>

75. Moreover, regardless of whether a manufacturer’s own cost, the industry average cost, or some combination form the basis on which a violation of the Chinese government’s prices floor ultimately would be determined, Dr. Netz concedes that charging prices below the industry average price is the basis for triggering an investigation.<sup>118</sup> If the costs and risks of responding to such an investigation create an economic incentive for a firm to maintain prices above the industry average prices reported by the Chinese government, then an assessment of whether the but-for prices predicted by Dr. Netz’s CPT overcharge model would be below the industry average prices reported by the Chinese government in conjunction with the price floor (which is the assessment I performed in my three examples) would be pertinent to evaluation of estimates from Dr. Netz’s model independent of the basis that would subsequently be used by the Chinese government in their investigations of alleged price floor violations.

**D. Dr. Netz has not accounted for the potential impact of the Chinese government’s price floors on CPT prices in her CPT overcharge model**

76. In her latest declaration, Dr. Netz suggests that her CPT overcharge model may account for the effect of the Chinese government’s prices floors when she states, “I have already included variables related to production costs, which is the basis for the price

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<sup>115</sup> Netz 2023 Declaration, pp. 13-14.

<sup>116</sup> Netz 2023 Declaration, p. 14.

<sup>117</sup> Netz 2023 Declaration, p. 14.

<sup>118</sup> Netz 2022 Rebuttal Report, p. 8.

floor.”<sup>119</sup> Dr. Netz’s inclusion of one variable related to CRT production costs (an index of specialty glass prices in South Korea) provides no indication of whether the but-for prices predicted by her CPT model would be below the corresponding Chinese government’s price floors. Thus, her inclusion of this variable does not change that her model does not account for regulatory factors that could have influenced the alleged cartel members’ pricing in the but-for world.

**E. Dr. Netz’s dismissal of the potential share of CPT sales whose prices were affected by the Chinese government’s price floors is not supported by evidence**

77. Dr. Netz asserts that the revenues associated with the transactions included in my price comparisons account for only 0.2% of the revenues across the entire damages period in her CPT overcharge regression. She concludes that this 0.2% share is “not sufficient to conclude that [Dr. Netz’s] model is not an economically sound basis for the calculation of classwide damages.”<sup>120</sup> In my Daubert Declaration, I explained that this calculation assumes without evidence that the Chinese government price floors were only in effect for two quarters (Q2 1999 and Q4 2000),<sup>121</sup> a point that Dr. Netz does not attempt to rebut in her response to my declaration.

78. If the price floors were in effect for longer, that would imply a larger magnitude of sales were subject to the floor. It is therefore useful to put into context the sales of relevant sizes of CPTs on a quarterly basis. Specifically, in the two quarters in which there is no dispute that the price floors were in effect (Q2 1999 and Q4 2000), CPTs with sizes subject to the floors that were manufactured in China accounted for 6.5% and 7.3% of global CPT sales, respectively, in the data on which Dr. Netz relies.<sup>122</sup> In those same two quarters, CPTs with sizes subject to the floors that were manufactured globally accounted for 20.1% and 33.3% of global CPT sales, respectively, in the data on which Dr. Netz relies.

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<sup>119</sup> Netz 2023 Declaration, p. 14.

<sup>120</sup> Netz 2022 Rebuttal Report, p. 10.

<sup>121</sup> Guerin-Calvert Daubert Declaration, ¶ 40.

<sup>122</sup> Observations where the country in which the CPT was manufactured is not identified in the data on which Dr. Netz relies were excluded from this analysis.

79. In sum, based on all of the foregoing in this declaration, Dr. Netz's responses in her most recent declaration fail to establish that her analysis of overcharges are reliable.

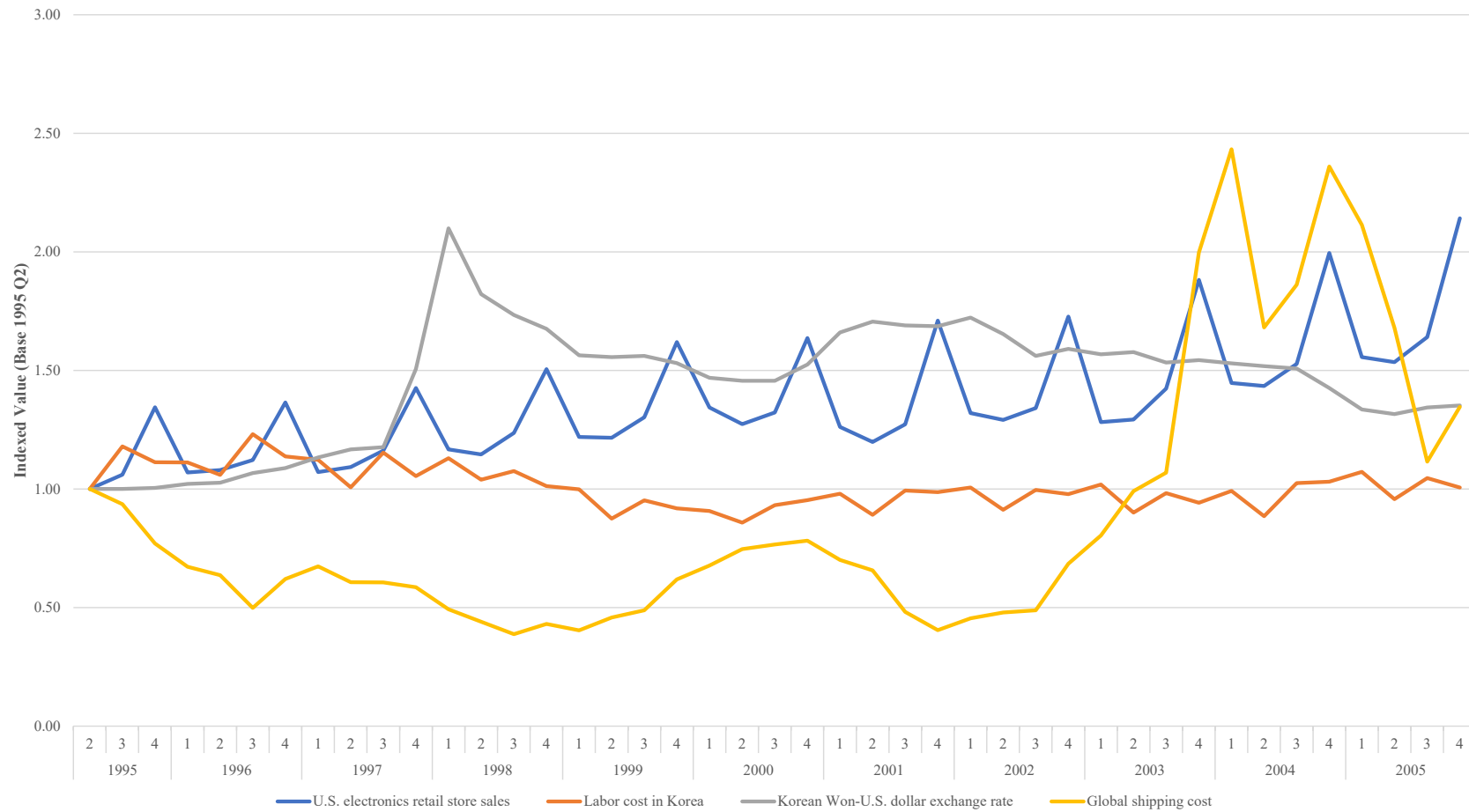
I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief. This declaration was executed on the 5th day of April 2023 in Washington DC.



Margaret E. Guerin-Calvert

April 5, 2023

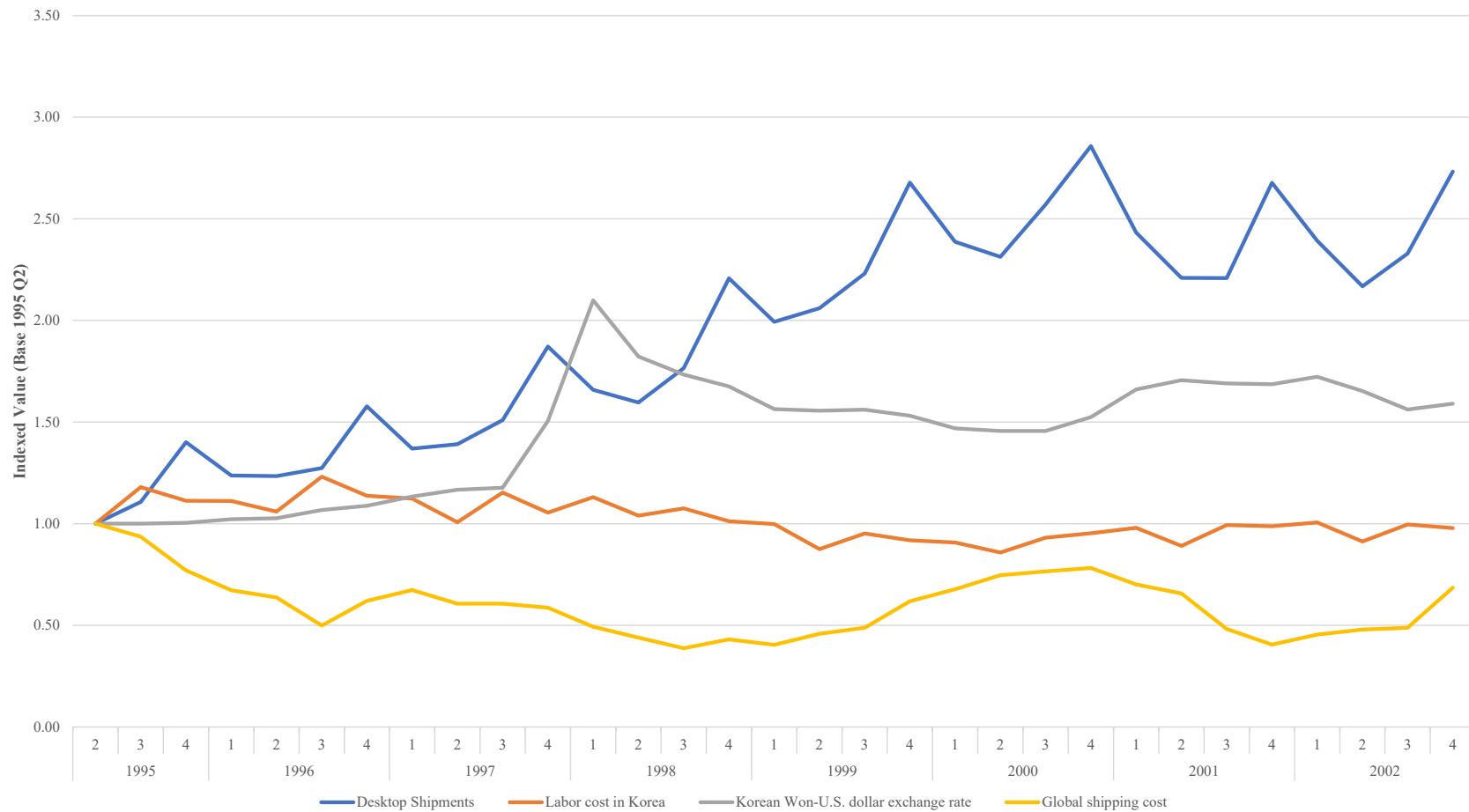
# Figures

**Figure 1: Omitted Market Factors Varied Substantially in Netz Period 1 – CPTs (1995 Q2 - 2005 Q4)**

Sources: (1) Bloomberg LP (Baltic Dry shipping index); (2) OECD StatExtracts Database (Korean labor cost index); (3) Federal Reserve Bank of St. Louis (Korean Won-U.S. dollar exchange); (4) U.S. Census Bureau (U.S. electronics retail store sales).

Notes: All series are set to 1.0 in Q2 1995.



**Figure 2: Omitted Market Factors Varied Substantially in Netz Period 1 – CDTs (1995 Q2 - 2002 Q4)**

Sources: (1) Bloomberg LP (the Baltic Dry shipping index); (2) OECD StatExtracts Database (Korean labor cost index); (3) Federal Reserve Bank of St. Louis (Korean Won-U.S. dollar exchange); (4) DisplaySearch (worldwide desktop shipments).

Notes: All series are set to 1.0 in Q2 1995.

**Figure 3: CPT Overcharges Estimated by Dr. Netz's Overcharge Model when Overcharges Are Allowed to Vary for Sub-Periods Between March 1995 and December 2006 Based on Additional Events that Affected Competitive Conditions**

Model	Estimated Overcharge for Each Period													Average Estimated Overcharge for Class Period	Overcharge significantly different than 0?	Overcharge significantly different from Netz Original?
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007			
Netz Original	9.0%												3.1%	8.9%	Yes	-
Netz segmentation based on LCD share	11.6%												6.2%	11.3%	Yes	No
Additional Events	11.8%		8.6%	3.7%	2.1%							-1.5%	-6.8%	4.4%	Yes	Yes

Sources: Backup to Expert Report of Janet S. Netz, Ph.D., September 26, 2014

Notes:

- (i) The additional event represented here is the Asian currency crisis in 1997-98
- (ii) Significance is determined at the 10% level.

**CDT Overcharges Estimated by Dr. Netz's Overcharge Model when Overcharges Are Allowed to Vary for Sub-Periods Between March 1995 and December 2006 Based on Additional Events that Affected Competitive Conditions**

Model	Estimated Overcharge for Each Period													Average Estimated Overcharge for Class Period	Overcharge significantly different than 0?	Overcharge significantly different from Netz Original?
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007			
Netz Original	22.0%												11.4%	22.0%	Yes	-
Netz segmentation based on LCD share	22.3%												21.8%	23.0%	Yes	No
Additional Events	14.9%	14.5%	-16.1%	-37.6%	-19.3%					-6.2%			-1.0%	-10.9%	Yes	Yes

Sources: Backup to Expert Report of Janet S. Netz, Ph.D., September 26, 2014

Notes:

- (i) The additional events represented here are: Windows 95 and other CDT demand shocks in 1995-96; and the Asian currency crisis in 1997-98
- (ii) Significance is determined at the 10% level.

**Attachment A – Materials Relied Upon by Margaret E. Guerin-Calvert**

**Expert Materials**

Expert Report and backup of Janet S. Netz, Ph.D., April 15, 2014, with Errata, July 3, 2014

Expert Report of Margaret E. Guerin-Calvert, August 5, 2014, with Errata, September 23, 2014

Expert Report and reliance materials of Robert D. Willig, August 5, 2014, with Errata,  
September 10, 2014 and September 23, 2014

Rebuttal Expert Report and backup of Janet S. Netz, Ph.D., September 26, 2014

Expert Surrebuttal Report of Margaret E. Guerin-Calvert, November 6, 2014

Expert Surrebuttal Report of Robert D. Willig, November 6, 2014

Supplemental Expert Report of Margaret E. Guerin-Calvert, March 16, 2022, with Errata,  
March 21, 2022

Janet S. Netz, Ph.D. Rebuttal to Supplemental Expert Report of Margaret E. Guerin-Calvert and  
Expert Report of Donald Clarke, April 27, 2022

Declaration of Margaret E. Guerin-Calvert in Support of Motion by Irico Group Corp. and Irico  
Display Devices Co., Ltd. to exclude the Testimony of Dr. Janet Netz, February 15, 2023

Declaration of Janet S. Netz, Ph.D. in Response to Irico Defendants' Motion to Partially Exclude  
Testimony, March 20, 2023

**Expert Depositions and Exhibits**

Deposition of Janet S. Netz, Ph.D., June 27, 2014

Deposition of Janet S. Netz, Ph.D., June 9, 2022

Deposition of Margaret E. Guerin-Calvert, September 17, 2014

**Depositions and Exhibits**

Deposition of Miao Li, March 7-9, 2023

Deposition of Tatsuo Tobinaga, July 16, 2012

**Academic Texts and Articles**

A. Colin Cameron and Pravin K. Trivedi, *Microeconometrics: Methods and Applications*,  
Cambridge University Press, 2005

ABA Section of Antitrust Law, *Econometrics: Legal, Practical and Technical Issues*, 2nd ed., ABA Publishing, 2014

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Barbara J. Alexander, “The Impact of Exchange Rate Levels and Changes on International Cartels: Implications for Liability and Overcharges,” *Antitrust Law Journal*, Vol. 70 (2003), pp. 819-846

James H. Stock and Mark W. Watson, *Introduction to Econometrics*, 3rd edition, Addison Wesley, 2011

Julio J. Rotemberg and Garth Saloner, “A Supergame-Theoretic Model of Price Wars during Booms,” *The American Economic Review*, Vol. 76, No. 3. (Jun., 1986), pp. 390-407

Peter Kennedy, *A Guide to Econometrics*, 6th ed, Wiley-Blackwell, 2008

### **Notifications**

“Notification of Publishing Industrial Average Production Costs for Some Types of Color CRT and Color TVs,” MII-PRC, April 2, 1999, Certified Translation

“Notification of Reporting Cost Information for Color TV and Color CRT Industry,” MII-PRC, February 3, 1999, Certified Translation

### **Other Legal Cases**

*In re Panasonic Corporation of North America*, United States Patent and Trademark Office, Trademark Trial and Appeal Board, Serial No. 76414813, October 21, 2005

### **News, Press, and Websites**

Pedro Pereira, “Higher monitor prices looming -- Shortages of cathode ray tubes, higher production costs in Japan taking a toll,” *Computer Reseller News*, 10 April 1995

Factiva Data, available at <<http://global.factiva.com>> (accessed 27 July 2014)

### **Bates Documents**

MTPD-0122906